



## DECLARATION OF STEVEN STANTON

1. I, Steven Stanton having filed patent application serial number 10/720,435 and having read the Examiner's Office Action declare as follows.

2. I have been in the specialty shaped box business for the past 20 years, primarily heart boxes. I started the business over 20 years ago. In the beginning I made small boxes for decorative accessories such as jewelry boxes, keepsake boxes and the like including heart shaped boxes. Today my business manufactures over 1 million boxes a year, mostly heart shaped candy boxes. I have worked extensively in the development of superior processes to perfect the construction of heart shaped boxes, made of paperboard, for the candy and cosmetic industries. Based on my experience I have determined that maximizing and controlling glue exposure is the most important processing variable in the integrity and cost of the box.

3. When I invented the construction shown in my patent no. 5,400,917 I was addressing the problem of sufficient strength in gluing the side to the closure of a candy box. These are separate pieces of thin board stock. The problem was placement of the glue to accomplish a good bond. This has to be done very fast as we make production runs into the thousands of units. The box has to be very low cost because the customers will not pay much for the boxes. Even one cent per box is a big added cost.

4. In the past we placed a bead of glue inside the edge of the closure near the interior corner and allowed it to flow into the corner to contact the side or we caused it to flow by pressing on a second closure piece. The bead was placed with the injector straight down. That was the only position we had for the injector. To accomplish the goal as ultimately shown in my '917 patent I conceived of the spacer with scallop type (or other shape) spaces. Then the glue could be injected (still vertically down) to fill the space, and it would flow against the side wall of the box. At that time we were injecting the glue straight down onto the closure because we had no other way to position the injector, nor did we consider any other position.

5. Later and as now claimed in the present patent application, I came up with a better solution; through experimentation I have found that we can inject the glue right into the corner if we aim the injector at an angle. This creates what we call a fillet, which means the

bead of glue is in contact with the side and the closure as we inject it. We do not depend on or have to cause flow of the glue as in the past.

6. With this new approach, the spacer is no longer necessary. This is important because my customers are very tough on pricing and the spacer adds cost.

7. Also through experimentation I found that the best angle is about half the angle between the side and the closure. Because most of the time the angle is 90 degrees the best injection angle is about 45 degrees. I also found that there was some tolerance for the angle, more so for lowering the injector toward horizontal than for raising it toward vertical. That was about 20 degrees up from the mid-angle; or in the case of a 45 degree mid-angle, a range of 25 degrees to 65 degrees from vertical.

8. I found that with a six-axis machine it could be programmed to traverse the interior corner maintaining the injection angle.

9. I have reviewed the Examiner's rejection. First, as I have explained above my prior patent (5,400,917) describes a different method. It requires a spacer with openings around the periphery to create spaces in which we inject glue that can flow to contact the side of the box. The thickness of the spacer determines how much glue can be put in it, and this allows the glue to flow against the side providing sufficient area of glue contact with the side. The present invention omits any spacer and does not depend on glue flow. Instead we inject the glue directly onto both the side and the closure to form a fillet.

10. The Examiner's statement about what my '917 patent says is wrong. In the patent I do not "leave a glue fillet for bonding" (quoting the Examiner). The Examiner's reference to figs 8 and 9 omits mention of the spacers 42 and 74 and the text at column 4, lines 24-64. This text points out that a full bead of glue is laid down on the spacer filling the glue spaces. There is no mention of injection of glue at an angle into the corner and this would not be possible because the corner is at the bottom of the spaces and is not accessible.

11. The examiner is correct with respect to the '917 patent in that the exterior closure element will spread glue; but he has ignored that the structure requires a spacer with glue spaces to receive glue. The present claims all require access to the interior corner and glue injection at an angle to form a fillet and absent any spacer.

12. Regarding the teaching of the '917 patent, the examiner's reference to the specification at p. 2 bottom is not correct. First no adhesive is or was sprayed. Spraying is

not used in any of our processes and would not work. We need a mass of glue and hot melt glue is deposited as a mass. At p. 2 bottom I point out that in '917 an extended area of glue contact on the side results from deposit of glue into the spaces created by the spacer as I have explained above.

13. The examiner is correct that Stanton '917 does not show glue-directing means on an interior corner as claimed. He then asserts that Moser and Lingemann show this. Those two references do not show what the examiner has stated as I will point out below. However, it would not be possible to inject glue into an interior corner in my structure of the '917 patent because the spacer prevents access to the interior corner; and in any case, it would be wholly inconsistent with the goal of injecting a mass of glue to fill the space and to flow against the side; but which is, in any case, irrelevant to the present claims.

14. The Examiner refers to Moser as showing glue directed on an interior corner as desired. I have carefully reviewed Moser and I can find no reference to a structure like a side and closure to be held together by glue along an interior corner. See my Fig. 2, 8a and 8b. There is nothing like this in Moser. The Examiner has not identified any particular part of Moser that shows providing a fillet of glue on the side and closure of a box.

15. I cannot speak as an expert respecting Moser because it has nothing to do with my area of expertise, making cardboard boxes, out of thin pieces of board stock by gluing them together. Instead, Moser relates to constructing a protector for the corners of an article to be packaged. In particular, for a honeycomb protector including an impact resistant corner (see column 1, lines 6-8 and 11-15). Apparently Moser addresses the problem relating to folding the honeycomb, which is then put onto the corners of items to be shipped. The Moser structure is a rigid multilayer structure about 1 inch thick. The inside is a honeycomb core. (See column 4, lines 1-37). Folding it is problematic. In order to fold it to form the protective corner of Fig. 1 it has to be crushed and stretched (see Fig. 3). Then an adhesive strip such as tape 251 can be placed on each of the surfaces 250 and 251 to hold the panel in the folded position (see column 5, lines 4-13).

16. The application of the adhesive strip of Moser to keep the folded panel in the folded position is not at all similar to the present invention that involves injecting glue at an angle into a corner formed by separate parts, a side element and a closure of a box, to make a fillet that will glue them together. It doesn't help to solve the problem that I was faced with and if it was to be applied to what is in the '917 patent, it would not result in my new

process. This is because an adhesive backed strip is not at all useful in my process and I don't claim use of an adhesive strip

17. The Examiner also cited Lingemann as disclosing, "adhesive may be injected into the corner (claims 2 and 6)". Again, this technology is completely foreign to mine. But as I read Lingemann there is no corner of a side element and a closure. Lingemann is talking about a spacer frame between two layers of glass. The spacer is made from a straight hollow profile structure filled. (Column 2, lines 5-7). It has 4 corners to create the frame (see Fig. 1). The patent is all about making the folded corners 1, 2, 3, and 4. This is done by a cut out (Fig. 3) that when folded gives a joint as in Fig. 6. Then according to claim 2 a fusion adhesive can be injected into and fill the hollow interior of the curved corner for hardening to create a plug thereby formed within the curved corner. The hollow interior is shown in Fig. 2. Apparently the purpose is to prevent weakening of the frame where it is bent to make the corner and to press out any portion that has collapsed when folded. (See column 3, lines 26-33).

18. This injection of fusion adhesive to form a plug to fill a hollow interior cannot be applied in any useful way to my fillet of glue to join separate members, a side element and a closure, of a box.

20. While it may be well known to use glue to make boxes, the present invention is the result of evaluation in making a particular kind of box, a candy box with a particular method of application of glue and with a particularly advantageous result. The invention solves the problem of adequate glue on both the side element and the closure without relying on glue flow by injecting the glue at an angle directly into the corner to form a fillet in adequate contact with both the side element and the closure.

21. The Examiner also rejected claim 5 further applying Matovich as "teaching the use of sealing tabs that uses adhesive means to form a superior tight seal". He concluded that the Matovich sealing tabs can be applied as taught to Matovich to form a superior tight seal.

22. Of course my comments about Moser and Lingemann are applicable to claim 5.

23. Also my tabs in claim 5 are not the same as those of Matovich. His tabs 22 and 24 (see Figs. 1 and 3) provide overlapping area (see column 3, lines 34-57). He uses heat-softening polyethylene that congeals to seal the tabs 22 to their mating surfaces. My tabs 102 (See fig 10) are extensions that allow for positioning of the closure element inside the

side element and permit spaces 104. The interior corner is created between the side element 52 and the tabs 102 and glue 106 is injected at an angle into that corner to form a fillet.

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I further declare that all statements made in this Declaration of my own knowledge are true and all statements made on information and belief are true and I acknowledge being warned that willful false statements and the like are punishable by fine or imprisonment or both under 15 U.S.C. 1001 and may jeopardize the validity of the application or any patent issuing thereon.

Date: 3-9-05

Signed: 

Steven Stanton